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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/091,300  | 06/16/1998  | WOLFGANG VON DEYN    | 47679               | 4798             |
| 26474   | 7590        | 04/06/2012           | EXAMINER            |                  |
| NOVAK DRUCE DELUCA + QUIGG LLP<br>300 NEW JERSEY AVENUE NW<br>FIFTH FLOOR<br>WASHINGTON, DC 20001 |             |                      |                     | HAVLIN, ROBERT H |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 1626  |             |                      |                     |                  |
|   |             |                      | MAIL DATE           | DELIVERY MODE    |
|   |             |                      | 04/06/2012          | PAPER            |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 09/091,300             | VON DEYN ET AL.     |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | ROBERT HAVLIN          | 1626                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 03 January 2012.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 17,18,21-23,28-31,34-42 and 46-52 is/are pending in the application.

4a) Of the above claim(s) 17,18,22,23,31,34,38-42,46,49 and 52 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 21,28-30,35-37,47,48,50 and 51 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

|  |   |
|--|---|
| <b>Attachment(s)</b>   |   |
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application                         |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 6) <input type="checkbox"/> Other: _____ .  |

## DETAILED ACTION

**RCE:** A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/3/12 has been entered.

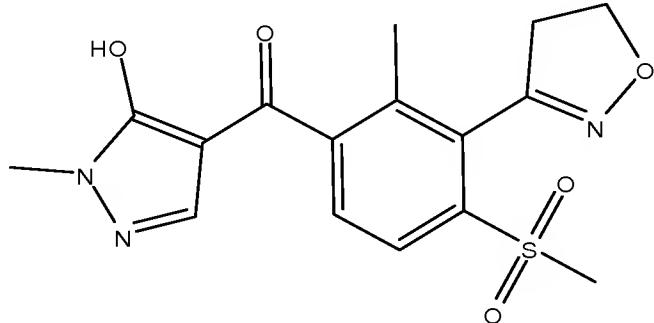
**Status of the claims:** Claims 17, 18, 21-23, 28-31, and 34-42, 46-52 are currently pending.

**Priority:** This application is a 371 of PCT/EP98/00069 (01/08/1998) and claims foreign priority to GERMANY 197 01 446.1 (01/17/1997). A certified copy of the foreign priority document is now of record (filed 5/19/2010).

### ***Election/Restrictions***

1. Applicant previously elected Group I (claims 18, 20, 21, 28-31, 34-42, and 46-52) and the species of claim 30 having the following structure:

4-[2-Methyl-3-(4,5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole



As detailed in the following rejections, the generic claim encompassing the elected species was not found patentable. Therefore, the provisional election of species is given effect, the examination is restricted to the elected species only, and claims not reading on the elected species are held withdrawn. Accordingly, the following claims not reading on the elected species or the elected group are withdrawn:

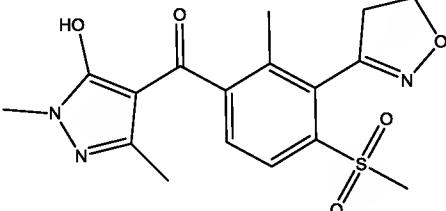
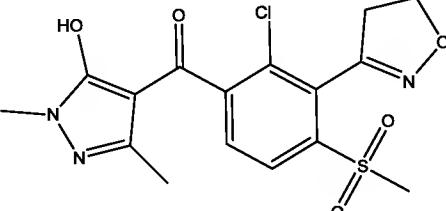
17,18,22,23,31,34,38-46,49 and 52.

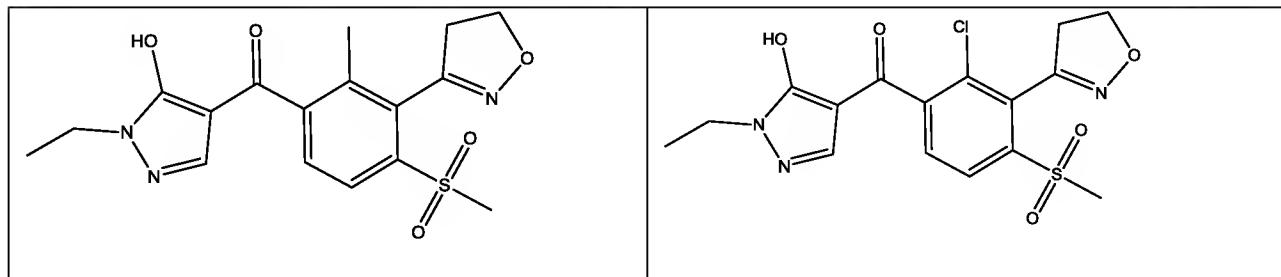
Should applicant, in response to this rejection of the Markush-type claim, overcome the rejection through amendment, the amended Markush-type claim will be reexamined to the extent necessary to determine patentability of the Markush-type claim. See MPEP 803.02.

### **RESPONSE TO APPLICANT REMARKS**

#### ***Claim Rejections – 35 USC 103***

2. Claims 21,28-30,35-37,47,48,50,51 were rejected under 35 U.S.C. 103(a) as being unpatentable over Von Deyn et al. (WO 96/26206 [English equivalent US 5,846,907]) in view of Silverman, R. B. (The Org. Chem. of Drug Design and Drug Action, Academic Press, Inc.: San Diego, 1992, pp. 4-51).

| CLAIMED INVENTION   | PRIOR ART (von Deyn, comps. 5.4 & 5.5)   |
|---|--|
|  |  |

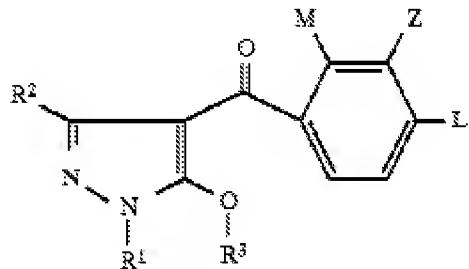


First, Applicant argues that Silverman does not support the proposition that one of ordinary skill in the art would reasonably expect the bioisosteric replacement (chloro to methyl) of a substituent in the prior art compound to result in a compound having similar utility. Second, Applicant argues that nothing in Von Deyn or Silverman suggests position "M" of Von Deyn's compound as a "result effective parameter." Third, Applicant provides a December 19, 2011, additional 132 declaration of Matthias C. Witschel ("Witschel 2<sup>nd</sup> declaration") arguing that the combined Witschel declarations corroborate "superior and unexpected properties" of the claimed compounds over the prior art.

Applicant's first argument is not persuasive. Silverman teaches what is generally known in the art regarding bioactive compounds including pharmaceuticals and herbicides. Specifically, as applicant acknowledges, Silverman teaches that chloro and methyl groups are "classical isosteres" which are considered interchangeable by those of ordinary skill in the art. Applicant further argues that the Witschel 2<sup>nd</sup> declaration demonstrates the point on pages 4-5. Witschel states opinion that Silverman's teaching is "far too general" to suggest a modification of Von Deyn. To the contrary, Silverman describes the interchangeability of chloro and methyl on page 19, Table 2.2, and describes applications of such interchangeability in a variety of contexts such as on

page 24-25 and pages 38-43. Thus, Silverman shows that one of ordinary skill in the art knows that chloro is routinely replaced with methyl in the course of developing bio-affecting compounds such as herbicides. In addition, Von Deyn, specifically teaches that the "M" group can be either chlorine or methyl (see claim 4 of '907). Therefore, one of ordinary skill in the art had the expectation that a methyl substitution would maintain activity.

Applicant's second argument is also not persuasive. Von Deyn teaches a genus of compounds that one of ordinary skill in the art could routinely produce and screen for activity. As shown Von Deyn Table 5 and claim 4 (of '907), the prior art directs one of ordinary skill to a small subgenus which includes the instantly claimed invention. Von Deyn teaches a genus of compounds of the formula



where C1-6-alkyl is listed as a preferred alternative

for M (col. 4 of the '907 patent), M as methyl is given as a specific example (col. 11), claim 4 lists methyl and chloro as among a few alternatives for M, and Tables 1-5 show that nearly all embodiments have M as Chloro or Methyl which shows the interchangeability of the two alternatives. Thus, one of ordinary skill in the art reading von Deyn would expect that modifying the Chloro group of compounds 5.4 and 5.5 to a methyl group would maintain the activity taught by the prior art. In addition, such a modification is within the scope of what von Deyn teaches as being an active

compound. Furthermore, Silverman teaches that one of ordinary skill in the art routinely makes such modifications to optimize utility. Thus, one of ordinary skill in the art was sufficiently apprised of the subject matter to practice the instant invention because the compound covered by a small genus and one of ordinary skill in the art would expect herbicidal activity of each of the members.

Applicant's third argument is that the Witschel 2<sup>nd</sup> declaration shows an unexpected result. An unexpected result is objective evidence that indicates patentability despite a *prima facie* case of obviousness. See MPEP 716.02. The Examiner has fully considered the Witschel 2<sup>nd</sup> declaration and weighed the evidence presented therein with the *prima facie* case and concluded that the claims remain obvious. Von Deyn teaches to one of ordinary skill in the art that the compounds taught therein, including methyl and chloro forms, possess herbicidal activity because the genus described by M specifically lists chloro and methyl as effective alternatives. This teaching is also reinforced by Silverman because they are classical isosteres.

The 2<sup>nd</sup> declaration also re-discusses the same data presented in an earlier declaration. As previously discussed in the prior office actions, the data from the declaration was not persuasive. Applicant has not made a direct comparison with the closest prior art.

Witschel's 2<sup>nd</sup> declaration elaborates on the methodology used to evaluate the experimental results reported by comparing reference photographs. The declaration also states that he did not make any of the observations and uses a "subjective" measure done under his supervision (page 17). Considering the methodology used to

produce the experimental data presented in the tables (such as compound 3.90 vs. prior art 5.5) the differences in results when weighed as a whole are merely differences in degree that one of ordinary skill in the art would expect and therefore not persuasive as to the nonobviousness of the claims. See MPEP 716.02.

Applicant has failed meet their burden of establishing how the results described in the declarations are indeed unexpected and of practical and statistical significance. See MPEP 716.02(b).

In conclusion, none of Applicant's arguments are persuasive and the rejection is **maintained**.

3. Claims 21, 28-30, 35-37, 47, 48, 50, 51 were rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 5,846,907 in view of Silverman, R. B. (The Org. Chem. of Drug Design and Drug Action, Academic Press, Inc.: San Diego, 1992, pp. 4-51).

Applicant does not make arguments different than those considered in the obviousness rejection *supra*. Therefore, this rejection is also **maintained**.

### ***Conclusion***

The claims are not in condition for allowance.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HAVLIN whose telephone number is (571)272-9066. The examiner can normally be reached on Mon. - Fri., 9:30am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, Joe McKane can be reached at (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Havlin/  
Primary Examiner, Art Unit 1626